

# इंटरनेट

# मानक

## Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 11471 (1985): Method for Determination of Dimensional Changes Due to the Effects of Varied Water and Heat Conditions for Machine-Made Carpets [TXD 4: Wool and Wool Products]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”



BLANK PAGE



*Indian Standard***METHOD FOR  
DETERMINATION OF DIMENSIONAL CHANGES DUE TO THE  
EFFECTS OF VARIED WATER AND HEAT CONDITIONS  
FOR MACHINE-MADE CARPETS**

( ISO Title: Machine-Made Textile Floor Coverings — Determination of  
Dimensional Changes Due to the Effects of Varied Water and  
Heat Conditions )

**National Foreword**

This Indian Standard which is identical with ISO 2551-1981 'Machine-made textile floor coverings — Determination of dimensional changes due to the effects of varied water and heat conditions' issued by the International Organization for Standardization ( ISO ), was adopted by the Bureau of Indian Standards on the recommendation of Textile Floor Coverings Sectional Committee and approval of the Textile Division Council.

In the adopted standard certain terminology and conventions are not identical with those used in Indian Standards; attention is especially drawn to the following:

Comma ( , ) has been used as a decimal marker while in Indian Standards the current practice is to use a point ( . ) as the decimal marker.

Wherever the words 'International Standard' appear, referring to this standard, they should be read as 'Indian Standard'.

**Cross Reference**

The Textile Floor Coverings Sectional Committee has reviewed the provisions of the following ISO Standard and has decided that the same is acceptable for use in conjunction with this Indian standard:

ISO 1957-1973 Machine-made textile floor coverings — Sampling and cutting specimens for physical tests.

Adopted 12 August 1985

© July 1988, BIS

Gr 2

As in the Original Standard, this Page is Intentionally Left Blank

## 1 Scope and field of application

This International Standard specifies a procedure for the determination of the dimensional changes that take place when machine-made textile floor coverings are subjected to varied water and heat conditions.

The method is applicable to all machine-made textile floor coverings.

## 2 Reference

ISO 1957, *Machine-made textile floor coverings — Sampling and cutting specimens for physical tests.*

## 3 Principle

Comparison is made between dimensions of a test specimen after conditioning in the standard atmosphere for testing textiles and then after being subjected to specified varied water and heat conditions.

## 4 Apparatus

**4.1 Instrument capable of measuring length** to the nearest 0,05 mm; for example, optical bench or mechanical device with gauge.

**4.2 Plate glass sheet**, marginally smaller than the test specimen, or other means of keeping the specimen flat while measurements are made. This will not be required if the instrument in 4.1 incorporates such a glass or metal plate.

**4.3 Ventilated drying oven**, capable of being controlled at  $60 \pm 2$  °C, with perforated and lacquered shelves that can be placed in the oven.

**4.4 Steel pins**, or other appropriate means of indicating the reference points on the test specimen, if necessary.

**4.5 Enclosure**, to provide the standard atmosphere for testing textiles.

**4.6 Container**, to hold water at  $20 \pm 2$  °C, of dimensions at least 20 mm greater than the test specimen and deep enough to accommodate the submerged test specimen

## 5 Test specimen

### 5.1 Sampling

Select the specimens according to the directions in ISO 1957.

### 5.2 Number and dimensions

Take at least three test specimens each measuring not less than 250 mm × 250 mm, noting the direction of manufacture.

### 5.3 Conditioning

Condition the test specimens until they are in equilibrium with the standard atmosphere for testing textiles.

## 6 Procedure

### 6.1 Initial measurement of the specimen

Make all measurements on the conditioned specimen when it is completely flat; this can be achieved by use of the glass plate (4.2) or other means.

On the conditioned specimen, measure the distance between the edges parallel to the direction of manufacture and between the edges at right angles to the direction of manufacture, each at two locations approximately 200 mm apart. If required by the method of measuring adopted, mark the pair of reference points, for example by the use of steel pins (4.4), approximately 200 mm apart on the edge parallel to the direction of manufacture and also on the edge at right angles to the direction of manufacture. Make all measurements on the back of the specimen to the nearest 0,05 mm.

NOTE — Products made of discrete layers, for example foam-backed constructions, should be measured on both the backing and the use-surface, and the results of both measurements given in the test report.

## 6.2 Determination

Place the test specimen, lying freely on the perforated and lacquered shelves, in the drying oven (4.3), controlled at  $60 \pm 2^\circ\text{C}$ . Keep the specimen in the drying oven for 2 h, then remove it and measure the distance between the two parallel edges or the two sets of marks to the nearest 0,05 mm, within between 6 and 7 min of removing the specimen from the oven.

Immerse the test specimen, laid flat, in water at a temperature of  $20 \pm 2^\circ\text{C}$  and allow it to soak in the water for 2 h. Remove the specimen from the water, taking precautions to avoid distorting its shape. Excess moisture may be removed by placing the specimen between sheets of blotting paper. Within  $5 \pm 1$  min of removing the specimen from the water, again measure the distance between the two parallel edges or the two sets of marks as specified in 6.1.

Dry the test specimen for 24 h in the drying oven at  $60 \pm 2^\circ\text{C}$  in the same conditions as before. Within between 6 and 7 min of removing the specimen from the oven again measure the distance between the two parallel edges or two sets of marks as specified in 6.1.

Finally, leave the test specimen for 48 h in the standard atmosphere for testing textiles. Measure the distance between the two parallel edges or the two sets of marks to the nearest 0,05 mm, note the final appearance of the test specimen, and assess the degree of cockling.

## 7 Expression of results

Calculate the arithmetic mean of the dimensions obtained for all specimens in the direction of manufacture and in the direction at right angles to this for each of the stages referred to in clause 6.

Calculate in each case the variations observed and express as a percentage using the formula

$$\frac{l_m - l_o}{l_o} \times 100$$

where

$l_o$  is the arithmetic mean of the initial measurements;

$l_m$  is the arithmetic mean of measurements at each of the stages referred to in clause 6.

Indicate shrinkage by a minus sign, and an increase in dimensions by a plus sign.

## 8 Test report

The test report shall include the following particulars :

- a) a statement that the procedure was conducted in accordance with this International Standard, and details of any operations not included, or optional;
- b) the individual values for each specimen of the measurements made in the direction of manufacture and in the direction at right angles to the direction of manufacture, together with the results obtained as specified in clause 7;
- c) a description of the final appearance of the test specimens, i.e. whether they exhibit mild, moderate or severe cockling;
- d) an indication of the type of measuring instrument used.